Appendix F

Response to Comments on Wisconsin's
SWAP - September 18, 1998

Response to Comments on Wisconsin's Source Water Assessment Program (SWAP)
Department of Natural Resources - September 18, 1998

Response to oral comments made at June 9, 1998 SDWA *Ad Hoc* Advisory Council Meeting

1. Comment: Bankers should be educated on naturally occurring groundwater contaminants and that informational brochures on these contaminants be provided with the assessment results.

   Response: The DNR and the Department of Health and Family Services have prepared brochures on radium, radon, iron and an information packet on arsenic. These, as well as other relevant materials that may be developed will be sent to communities in areas affected by these naturally occurring contaminants.

2. Comment: A web page would be an excellent way to get information on the SWAP to the public.

   Response: The DNR is planning to put SWAP draft plans, meeting schedules, key issues newsletters, and other informational items on the Bureau of Drinking Water and Groundwater's web page this fall. When assessments are completed, assessment information will be placed on the page.

3. Comments: A web page and newsletters are the best way to disseminate information on the SWAP. General media coverage should be explored as a way of educating the public about the SWAP.

   Response: So far one issue of the Wellhead Protection Newsletter has been devoted to the SWAP, a second Wellhead Protection Newsletter on the SWAP is being developed. The Wisconsin Groundwater Association published an article on the SWAP and several presentations have been made to organizations around the state. The general media has not yet shown interest in picking up on these stories or contacting us for more information. The state will continue to make every effort to educate the public on the SWAP and source water protection.

4. Comment: Contact Council members that were not in attendance for their input.

   Response: This was done and two sets of written comments were received from non-attendees. Their comments and our responses are included in this document.

5. Comment: A list of acronyms would be helpful in subsequent documents.

   Response: A list of acronyms will be included when more than a few acronyms are used.

6. Comment: Get more input from a greater variety of land use experts, not just land conservation professionals and farmers.

   Response: The Planning and Mapping and Local Government Subcommittees of the Groundwater Coordinating Council have been given updates on the SWAP. Members of these subcommittees include University and state agency land use experts. The Local Government Subcommittee gave us substantial input on the SWAP at their February 4, 1998 Conference Call

7. Comment: Leave the delineation flexible so communities would not be discouraged from using other methods of delineation, especially in confined aquifer settings.

Response: Communities will have the option of submitting their own delineations in wellhead protection plans for source water assessments for groundwater systems. Additionally, an advanced delineation funding program is proposed to fund delineations that are appropriate for various hydrogeologic settings.

8. Comments: Use larger radius delineations for systems in karst environments and consider basing radii size on geologic conditions. The DNR should look at doing more advanced delineations for groundwater systems in certain geologic settings such as karst and confined aquifers.

   Response: Since the June 9th meeting, a technical advisory committee (TAC) met to address the problem of doing delineations in karst and confined settings and to assess the usefulness of regional studies for preparing delineations. The TAC recommended that for wells in karst settings a larger delineated area would not address the problem of defining a capture zone in fractured rock. The TAC that mapping karst features in the vicinity of public wells would be more useful for source water assessments. The features act as conduits from contamination sources at the surface to the wells. There was consensus that this approach would be more effective than using a larger radius. It should be noted that carbonate bedrock underlies 1/3 of the state and that defining "karst areas" is not easy.

   For confined settings, the TAC saw much less potential for groundwater contamination from the surface around the well and greater difficulty in delineating recharge areas. The TAC recommended identifying recharge areas for large pumping centers. This is something that can be accomplished by modeling regional groundwater flow. There was a consensus that the threat of contaminants penetrating confining layers through conduits such as improperly abandoned wells justified doing advanced delineations with regional models. Acting on the Ad Hoc Council's above comment and the TAC's recommendation we have initiated a follow-up project with the USGS to identify recharge areas for approximately 100 wells in Brown, Outagamie, Winnebago, Calumet, and parts of Fond du Lac Counties. The USGS will update a model previously used in their study of pumping regimes in Lower Fox River Valley and adapt it to produce capture zone delineations for municipal wells. Other regional studies resulting in models capable of delineating source water protection areas include the completed Dane County Hydrologic Study delineations, the delineations to be completed in the seven SEWRPC counties (Washington, Ozaukee, Milwaukee, Waukesha, Kenosha, Racine, and Walworth) in the next few years. Additionally advanced delineations have been completed for most of the municipalities in Eau Claire and Chippewa Counties.

   Funding available for the SWAP will not permit advanced delineations for all municipal wells. However, the DNR will look at prioritizing municipal wells for advanced delineations as funding allows. For areas not covered by regional studies the TAC identified groundwater susceptibility, population served, ease of modeling and community interest as criteria for prioritizing communities for advanced delineations. The DNR will prepare a solicitation for proposals to do advanced delineations for selected municipalities.

9. Comment: A uniform approach is more easily understood. One method should be used in all geologic environments. The DNR has special casing requirements in certain areas of the state where there are geologic conditions that require added protection.

   Response: The response to Comment #8 regarding karst, confined settings and regional studies applies to municipal wells only. For other-than-municipal community and noncommunity wells we are proposing uniform fixed radius delineations with radii based on system type.

10. Comment: The radius used in delineations should not be arbitrary.

Response: SWAP funding is not adequate to do advanced delineations for every public water system in the state. The calculated fixed radius delineation method proposed for municipal systems where advanced delineations are not completed is a compromise between fixed radius delineations and advanced delineations. Calculated fixed radius delineations considered aquifer porosity, which provides for some variation in geologic environments, pumping rate, which accounts for water usage differences, and length of open interval which accounts for well construction differences. For other-than-municipal community and noncommunity systems, where jurisdiction over source water protection areas is much more limited, fixed radius delineations are proposed due to ease of implementation and the benefits of communicating a uniform approach (see Comment #9).

11. Comment: It should be stated in the draft plan that only nitrate and bacteria would be looked at in assessment areas for transient noncommunity wells.

    Response: While potential sources of nitrate and bacteria will be the focus of assessments for transient noncommunity systems we plan on coordinating a consistent approach to assessments for all public water supply systems. This will include identifying other potential sources of contamination while on-site doing the assessments. Few potential contaminant sources are likely to be present within the 200-foot radius source water protection area of a transient noncommunity well.

12. Comments: Do not put any more resources into the delineations and assessments for surface water systems than is necessary. Do not segment watersheds for varying levels of assessment. The surface water assessment strategy should be reduced and that resources saved there should be targeted at groundwater systems. Surface water assessments should be kept to a minimum.

    Response: Due to lack of support for the proposed segmentation strategy we have eliminated that portion of the surface water system assessment strategy. We have reduced the scope of the contaminant inventory to using land use data and targeting a few key potential contaminant sources. We propose to determine surface water susceptibility from input from water supply and watershed professionals, proximity of stream discharges to intakes, magnitude of stream discharges, water quality monitoring data, and limited contaminant source inventory results. The results of assessments will be used to point to specific areas for source water protection measures.

13. Comment: Look at non-metallic mining as a potential source of contamination for groundwater systems.

    Response: Mining is listed as one of the potential contaminant sources on the current inventory list.

14. Comment: Use county staff to do contaminant inventories. Their expertise could benefit the quality of data and the efficiency of its collection.

    Response: The DNR has looked at using county staff to do contaminant inventories. Only a few counties are prepared to do this so it would be impossible to do this statewide. There are concerns about data quality and consistency when gathered by many entities. The DNR can use uniform equipment, protocols and staff to get consistent, high quality data in a cost-efficient way. However, the DNR plans to use many existing data sources. Most of these potential contaminant source databases are housed at the state level but when available from counties the DNR will consider using them if they meet data quality protocols.

15. Comment: The SWAP should be coordinated with other programs to avoid redundancy.

Response: Drinking Water and Groundwater Program staff are currently working with staff from the Watershed Management, Waste Management, Community and Financial Assistance, and Remediation and Redevelopment programs within the DNR. Other agency contacts include United States Geological Survey, Central Wisconsin Groundwater Center, Wisconsin Geological and Natural History Survey, Department of Agriculture, Trade and Consumer Protection, and Department of Health and Family Services.

16. Comment: Carry out a Source Water Protection Program when the SWAP is completed.

    Response: We are currently developing ideas for Source Water Protection. We plan to tailor the assessment results to be useful for wellhead and watershed protection plan development. The results of the source water assessments should indicate what other kinds of protection efforts are appropriate.

17. Comment: The 10% set-aside for the SWAP is an appropriate amount to fund the program.

    Response: The DNR has requested the full 10% set-aside for the SWAP in the State's Safe Drinking Water Loan Program Intended Use Plan.

Responses to written comments received from Wisconsin League of Women Voters

18. Comment: The State should continue to make every effort to get widespread distribution of information about the SWAP, and solicit information and feedback from the public and specific stakeholder groups. More TACs and media use are excellent. While states and EPA work closely with drinking water delivery professionals, the public is not at all well informed.

    Response: See response to Comment #3 above.

19. Comment: Assessment should be as thorough and broad-based as possible. If other TACs are created as suggested, they should include knowledgeable people from various groups. Health care professionals, for example are aware of the vulnerabilities of such groups as asthmatics, those with weakened immune systems, and children.

    Response: The Chief Medical Officer and a Toxicologist from the Wisconsin Department of Health and Family Services are on the SDWA Ad Hoc Advisory Council. They were chosen for their broad ranging experience with health issues related to drinking water.

20. Comment: DNR should report periodically (on the status of the SWAP program), preferably at regular intervals, (monthly for instance) to the public on progress and problems and continue to solicit input. This could be done principally through newspapers (don't forget the weeklies). A monthly "SWAP report" in papers around the state would be an excellent way to keep the public updated and interested.

    Response: The DNR will seek papers that are interested in publishing such a report. In the meantime we will continue to give updates in the Wellhead Protection Newsletter, The Wisconsin Groundwater Association Newsletter and other Drinking Water related publications.

21. Comment: No (I do not agree with the proposed delineation methods for systems using groundwater). As the goal of SWAP is to determine threats to drinking water by assembling information, the delineation should be as detailed as possible with modern techniques, e.g. computer modeling and GIS. This is directly related to Section 4—how do you know if water is or might be contaminated if you don't know

where it comes from? Every effort should be made to find funding and proceed with detailed mapping. A simple fixed radius system is 19th century technology, we have better technology and worse problems.

Response: See response to comment # 8 above.

22. Comments: Assuming contaminant sources are accurately identified, and good monitoring maintained, this (the previously proposed segmentation strategy) is a good plan. Monitoring and contaminant source identification are the critical factors. Segment evaluation criteria should not be weighted. All criteria are important (not just land use). Land use data should be used to determine the "likelihood of critical contaminants in the segment" Critical uses include cattle pig and other animal use areas; sewage/septic proximity, toxic waste proximity; and chemical wastes. Water quality monitoring data is critical. Use U.S. Public Health Guidelines, EPA Guidelines and state guidelines.

    Response: See comments and the response under #12 above. Critical uses suggested will be considered in potential contaminant inventories. Water quality monitoring data will be evaluated as part of the proposed susceptibility analysis.

23. Comment: Animal "feed lot" needs to include pastures and other containment areas where cattle, pigs, emus, etc. are at a density where their wastes would be a threat.

    Response: Animal feedlot will be defined by the DNR's Runoff Management program based on the number of animal units.

24. Comment: The general approach (for completing SPSC inventories within source water protection areas) sounds good. Again I'm concerned abut data availability, and think provision for funding is needed to increase the data base.

    Response: See response to comment #17 above.

25. Comment: Prevention is the best, and probably cheapest strategy (for all public water supply systems including surface water systems). Ideally prevention should begin by developing plans to prevent contaminating sources from being situated where they would affect water sources. This would mean being aware of and involved in land use planning every step of the way. Investment should be made to develop plans and promote them and educate the public regarding the need for the proposals.

    Response: We agree that prevention is the best strategy and are designing source water assessments to support land use planning through wellhead protection and watershed planning activities.

26. Comment: This level of exactness (achieved by each assessment to be considered "complete") should depend on U.S. Public Health and EPA guidelines as to critical amounts of contaminants that would be harmful in drinking water.

    Response: Contaminants of concern are those which are, or may be, regulated under the SDWA. We will focus on identifying potential contaminant sources that present the greatest likelihood that a contaminant will enter a public water supply at a level which may result in an adverse human health impact.

27. Comment: Labor unions should be included

    Response: We have included representatives from groups with large numbers of public water systems, agencies with potential contaminant source information, environmental groups, technical experts on

groundwater and surface water, health organizations and other interested parties in the SWAP development process. Many labor unions are represented in these various groups. We are open to input from all groups and individual stakeholders interested in the SWAP.

28. Comment: The SWAP program development and implementation needs enough dollars to do a fully adequate identification of source waters, especially ground water, and of contaminant sources. This is not an area to be pinching pennies in. Problems of contamination are increasing, population is growing, animal feedlots are growing etc. All possible sources of funding should be tapped, others developed or legislated as needed to do an adequate job. The need to do this should be made clear to the public and legislators if needed, and every effort made to get the funding to do a first rate job

    Response: See response to comment #17 above.

Responses to written comments received from Waukesha Co. Dept. of Parks and Land Use

29. Comment: The state has provided opportunities for participating in the development of the SWAP program. Creating technical advisory committees made up of owner/operators of similar types of systems, that share similar concerns may be beneficial way of generating input.

    Response: The membership of the SDWA Ad Hoc Advisory Council was chosen to represent the largest groups with public water systems. We will consider forming a technical advisory committee of owner/operators for input to the SWAP if there is interest by the owners/operators.

30. Comment: Contaminant source inventories and susceptibility analyses should be evaluated for completeness of information. If TAC are involved in designing inventories and susceptibility analyses, they must be completed using a similar format.

    Response: Source inventories will be evaluated by DNR Regional staff as part of the vulnerability assessment process. Additionally the inventories will be cross-checked with electronic databases that exist for certain potential contaminant sources. The results of the assessments will available on the Internet where they may be further reviewed for completeness and accuracy.

31. Comment: The public is very concerned about drinking water supplies and needs to be kept informed of the SWAP program. Local newspapers may be a media used to keep the public informed. News releases may be modified for different areas of the state. Water systems may also send information in the water bill. The public should be updated every 3 or 4 months.

    Response: See responses to comments #3 and #20 above. Consumer Confidence Reports will also include information about the SWAP.

32. Comment: The delineation method proposed for systems using groundwater seems reasonable. The process is in place if a system chooses to delineate recharge areas using a method other than the CFR.

    Response: See response to comment #7 above.

33. Comments: Those areas that have a higher impact potential should be assessed in greater detail. These (proposed) four criteria are broad enough to evaluate and rank segments. Additional ranking categories may only make the ranking system more difficult to manage. The criteria used to evaluate segments should be weighted, perhaps using a point system. Based on total points, a segment may than be assigned to a impact potential (Level 1, Level 2, Level 3). Land use should be an important

consideration when ranking a segment. Each land use, whether agriculture, commercial, industrial, or residential, may have critical sources that need to be inventoried. Water quality monitoring data is necessary. The parameters monitored should be related to the land use and critical sources identified.

Response: See response to comment #12.

34. Comment: The Public Water Supply Contaminant Use Inventory Form (3300-215) appears to be fairly complete. An addition may include Transportation accidents/Toxic and hazardous spills.

    Response: ERRP sites (listed on the form 3300-215) include spills sites.

35. Comment: Yes (I agree with the proposed general approach for completing SPSC inventories within source water protection areas), to assemble all existing sources of information seems to be the most efficient method. Field investigations may then be necessary to verify or complete an inventory.

    Response: We propose to have some field staff available for field verification of existing potential contaminant source inventories on an as-needed basis.

36. Comment: Prevention strategies should always be included for all public water systems. Relying only on treatment as a drinking water source public health protection strategy may only lead to further degradation of water quality.

    Response: See response to comment #25.

37. Comment: If the primary goal of the SWAP is to produce assessments useful to communities in developing wellhead protection plans and watershed protection projects, then accuracy of information is very important.

    Response: We are interested in maintaining a high level of accuracy. In fact one key benefit of the SWAP may be to improve the locational accuracy of existing potential contaminant source databases. New data collected will meet high standards for locational accuracy.

38. Comment: The state is concerned about producing consistent information, and therefore proposes the DNR conduct the assessments. However, local participation on the SWAP program can produce better follow-up activities. Several counties have been working with the DNR for several years. This has been done through the County Delegation program and some counties have contracted to sample and conduct inspection at transient noncommunity water systems. Therefore, counties should be considered to assist the state with the assessments.

    Response: We value the resources available at the county level and will evaluate the potential of counties to assist the state with the assessments.